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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

LEE, PHILIP C

ART UNIT PAPER NUMBER

2154

DATE MAILED: 12/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/894,471

Applicant(s)

MILLET, TIM

Examiner

Philip C Lee

Art Unit

2154

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 and 30-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 and 30-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-17 and 30-34 are presented for examination.

Election/Restrictions

2. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-17 and 30-34, Group I, drawn to a method detecting nodes in a ring computer network, classified in class 709, subclass 251.
 - II. Claims 18 and 19, Group II, drawn to a database schema or data structure of topology information, classified in class 707, subclass 100.
 - III. Claims 20-29, Group III, drawn to a method of data routing based on priority, classified in class 709, subclass 238.
3. Inventions I, II and III are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention II has separate utility such as data structure of topology information and invention III has separate utility such as data routing based on priority; this is a patentable distinct feature not found in invention I. See MPEP § 806.05(d).
4. Because these inventions are distinct for the reasons given above and search for Groups II

and III are not required for Group I, restriction for examination purposes as indicated is proper.

5. During a telephone conversation with Thomas Brennan, attorney registration number 35,075, on 12/02/04 a provisional election was made without traverse to prosecute the invention of group I, claims 1-17 and 30-34. Affirmation of this election must be made by applicants in replying to this Office Action. Claims 18-29 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to non-elected inventions.

6. The specification is objected to because of the following informalities and grammar errors, page 5, line 6, “system 100” [i.e. system 100 is not in figures], page 7, line 2, “Blade 112-1” [i.e. 112-2?], line 4, “Blade 112-1” [i.e. 112-3]. Appropriate correction is required.

Claim Rejections – 35 USC 112

7. Claims 2, 8 and 31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. Claim language in the following claims is not clearly understood:

- i. As per claim 2, line 2, it is unclear if “a discovery packet” refers to a “discovery marker associated with a master node”; Line 3-4, it is unclear if the topology information being clear is on the marker or on the first node.
- ii. As per claims 8, lines 3-4 and 31, lines 4-5, they have the same uncertainties set forth in claim 2 above.

Claim Rejections – 35 USC 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

9. The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

10. Claims 1 and 30 are rejected under 35 U.S.C. 102(e) as being anticipated by Nakazumi, U.S. Patent 6,304,557 (hereinafter Nakazumi).

11. As per claims 1 and 30, Nakazumi taught the invention as claimed for detecting nodes in a ring network, comprising:

receiving a packet (col. 9, lines 9-10);

for each discovery marker (e.g. node identifier) in the packet, saving topology information associated with the discovery marker (col. 3, lines 60-65);

adding a first discovery marker to the packet when the packet does not contain the first discovery marker, wherein the first discovery marker comprises topology information associated with the first node (col. 4, lines 10-13, 18-21); and

sending the packet to a next node in the network (col. 4, lines 23-24).

Claim Rejections – 35 USC 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 6, 7, 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakazumi in view of De Nijs et al, U.S. Patent 5,568,525 (hereinafter De Nijs).

14. As per claims 7 and 13, Nakazumi taught the invention substantially as claimed comprising:

receive a packet (col. 9, lines 9-10),
for each discovery marker in the packet, save topology information associated with the discovery marker (col. 3, lines 60-65),
add to the packet a first discovery marker when the packet does not contain a first discovery marker, wherein the first discovery marker comprises topology information associated with the first node (col. 4, lines 10-13, 18-21), and send the packet to a next node (col. 4, lines 23-24).

15. Nakazumi did not teach blades comprising ring controllers. De Nijs taught that a plurality of blades connected in a ring network (col. 2, lines 59-62), wherein each blade further comprises a ring controller (col. 3, lines 3-6).

16. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Nakazumi and De Nijs because De Nijs's teaching of blades comprising ring controllers would increase efficiency of Nakazumi's system by automatically connecting a network workstation (e.g. node) of a particular protocol type with network equipment of the same protocol type (e.g. other node) (col. 1, lines 9-11).

17. As per claims 12 and 6, Nakazumi and De Nijs taught the invention substantially as claimed in claims 7 and 1 above. De Nijs further taught wherein the node further comprising blades in a switch (col. 2, lines 59-62; col. 3, lines 3-6).

18. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Nakazumi and De Nijs because De Nijs's teaching of blades comprising ring controllers would increase efficiency of Nakazumi's system by automatically connecting a network workstation (e.g. node) of a particular protocol type with network equipment of the same protocol type (e.g. other node) (col. 1, lines 9-11).

19. Claims 2, 4, 8, 10, 14, 16, 31 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakazumi and De Nijs in view of "Official Notice".

20. As per claims 8, 14, 31 and 2, Nakazumi and De Nijs taught the invention substantially as claimed in claims 7, 13, 30 and 1 above. Nakazumi and De Nijs did not specifically teach clearing old topology information prior to saving the topology information. "Official Notice" is taken for the concept of reusable memory is known and accepted in the art. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to include clearing old topology information in order to save topology information with higher priority (e.g. associated with master node) because by doing so it would increase the efficiency by conserving memory space for nodes with limited memory.

21. As per claims 10, 16, 33 and 4, Nakazumi and De Nijs taught the invention substantially as claimed in claims 7, 13, 30 and 1 above. Although, Nakazumi and De Nijs taught wherein the topology information further comprising: a connection state (e.g. line information) and node characteristics (see Nakazumi, col. 1, line 64-col. 2, line 3; col. 10, lines 12-25), Nakazumi and De Nijs did specifically detailing other types of topology information. "Official Notice" is taken for the concept of different topology information is known and accepted in the art. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to include different topology information, such as a control master state, according to the user's desire to increase the field of use in their system.

22. Claims 3, 5, 9, 11, 15, 17, 32 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakazumi and De Nijs in view of Borella et al, U.S. Patent 6,269,099 (hereinafter Borella).

23. As per claims 9, 15, 32 and 3, Nakazumi and De Nijs taught the invention substantially as claimed in claims 7, 13, 30 and 1 above. Nakazumi and De Nijs did not teach removing the first discovery marker from the packet. Borella taught a similar invention comprising:

when the packet does contain the first discovery marker, removing the first discovery marker from the packet (col. 3, lines 29-34).

24. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Nakazumi, De Nijs and Borella because Borella's method of removing a discovery marker would increase the system's alertness by allowing topology information to be extracted from the removed discovery marker.

25. As per claims 11, 17, 34 and 5, Nakazumi and De Nijs taught the invention substantially as claimed in claims 7, 13, 30 and 1 above. Nakazumi and De Nijs did not teach different fields in the discovery marker. Borella taught more or fewer fields could be used in peer discovery marker (col. 6, lines 34-50).

26. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Nakazumi, De Nijs and Borella because Borella's teaching of more or fewer fields in the peer discovery marker would increase the flexibility of Nakazumi's and De Nijs's systems by allowing different fields such as a packet ring master field and a control master field as a matter of design choice for their system.


CONCLUSION

27. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Uematsu et al, U.S. Patent 6,785,224, disclosed a method of discovering ring topology by using node identifier.

28. A shortened statutory period for reply to this Office action is set to expire THREE MONTHS from the mailing date of this action. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip C Lee whose telephone number is (571)272-3967. The examiner can normally be reached on 8 AM TO 5:30 PM Monday to Thursday and every other Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on (571)272-3964. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)350-6121.

P.L.


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